and continuing advice and support, to D. Goodwin and D. S. Melville for their comments on this manuscript and to W. E. Fletcher for permission to include details of his sighting of a Lesser Whitethroat.

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# The introduction and subspecies of the Rose-ringed Parakeet Psittacula krameri in Egypt 

by Steven M. Goodman

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The Rose-ringed Parakeet Psittacula krameri has been introduced in various portions of the world including North America (Bull \& Ricciuti 1974), the Middle East (Hüe \& Etchécopar 1970) and certain localities in southern and eastern Africa (Clancey 1980, Britton 1980). Although not indigenous to Egypt, the species became established there in the early 1900's as a nesting bird in the Giza Zoological Gardens (Flower \& Nicoll 1908, Nicoll 1912). Between 1901 and 1908, several captive birds held within the zoo escaped and are presumed to be the original stock of the extant local population, which later spread to the environs of Giza and Cairo. However, this was not the first modern introduction into Egypt, for in the United States National Museum (USNM) there is a of specimen ( 152788 ) collected on 19 December 1895, at Helwan. Because the specimen shows no signs of being a cage bird (e.g. no excessive feather wear, no rings, etc.), it is presumed that it was free roaming.

The feral population within the zoo grounds quickly adapted to the local conditions and apparently became such a pest that between 1916 and 1919 127 birds were killed (Flower 1933). Meinertzhagen (1930) reported them well established in the Giza area, and some occasionally wandered to Helwan and the Delta Barrage. Haensel (1975), found about so individuals living wild on the zoo grounds in the fall of 1971. In January-February 1979 (with Mr. Patrick H. Houlihan) and in late April-May 1981 I observed flocks of 35 and 40 birds (respectively) on the zoo grounds. Sutton (1945) did not report the bird in the nearby Gezira Sporting Club, Zamalek (about 4 kms from the Giza Zoological Gardens), but, by the spring of 198r it had found suitable refuge there as a breeding resident, and flocks of up to is could be seen (pers. obs.). The Rose-ringed Parakeet's recent feral distribution in Egypt, however, is not just confined to the general Giza-Cairo area. In the USNM there is a $\%$ specimen ( 551117 ) collected on 14 April 1971
at Bahig ( 30 km southwest of Alexandria and 190 km northwest of Giza). Because of the distance between Giza and Bahig, it is most likely that its introduction at these localities are independent of one another.

The identification of the subspecies introduced into Egypt has remained somewhat of a problem. Meinertzhagen (1930) tentatively assigned it to manillensis, but subsequently (1954) altered this identification and claimed it was borealis that was introduced. Hachisuka (1924) considered the bird referable to layardi $[=$ manillensis] based on a specimen collected at Giza. Vaurie ( 1969 ) identified it as borealis.

Table I
Comparison of the measurements of Egyptian Rose-ringed Parakeets Psittacula Erameri collected at Giza between 1910 and 1917 with the 4 extant subspecies.

| Egyptian specimens | Wing (mm) | Tail (mm) | Culmen (mm) |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
|  | $\begin{aligned} & 164-174(167.0)^{1} \\ & (\mathrm{n}=10) \end{aligned}$ | $\begin{aligned} & 202-225(216.0) \\ & (\mathrm{n}=6) \end{aligned}$ | $\begin{aligned} & 21-26(24.0) \\ & (\mathrm{n}=9) \end{aligned}$ |
| $\%(\mathrm{n}=6)$ | 155-166(162.2) | 183-211 (198.5) | 22-25 (23.2) |
| manillensis ${ }^{2}$ |  |  |  |
| $\delta^{\circ}(\mathrm{n}=8)$ | 162-180 (170.0) | 203-235 (219.0) | 22-25 (23.3) |
| ¢ $(\mathrm{n}=8)$ | 153-167 (162.6) | 174-210(193.3) | 21-24(22.6) |
| borealis ${ }^{\mathbf{2}}$ |  |  |  |
| of ( $\mathrm{n}=9$ ) | 170-177(173.9) | 226-253(239.2) | 22-25 (23.2) |
| $\%(\mathrm{n}=8)$ | 170-175 (172.4) | 211-230 (220.0) | 21-24(23.0) |
| parvirostris ${ }^{2}$ |  |  |  |
| $\sigma^{\circ}(\mathrm{n}=10)$ | 146-160(153.0) | 215-246 (233.7) | 19-2 ( 19.6 ) |
| $\bigcirc(\mathrm{n}=8)$ | 148-160 ( 53.4 ) | 184-218 (196.4) | 19-21 (19.6) |
| krameri ${ }^{2}$ |  |  |  |
| $\left.\mathrm{o}^{\text {( }} \mathrm{n}=12\right)$ | 144-157(150.3) | 194-278 (231.4) | 18-2 ( 19.6 ) |
| ¢ ( $\mathrm{n}=10$ ) | 143-152 (147.6) | 177-240(198.2) | 18-21 (19.8) |

Notes: ${ }^{1}$ Range and mean (in parentheses).
$={ }^{\mathbf{2}}$ Measurements of subspecies after Forshaw (1978).
The Asian subspecies borealis and manillensis, the forms most commonly introduced around the world, differ from the native sub-Saharan subspecies, krameri and parvirostris, by being larger (Table I) and the males having more distinct facial and collar markings (Forshaw 1978). Based on these characters all the Egyptian birds examined are referable to the Asian forms. The Asian subspecies are best separated from one another by bill colour; with manillensis having red upper and wholly black lower mandibles, and borealis having a red bill that is sometimes marked on the lower mandible with some black (Ali \& Ripley 1969). The postmortem colour change of the bill is not very pronounced, and the differentiation between the black and red portions remains distinct in museum specimens. Of the 20 adult specimens examined which were collected at the Giza Zoo between 1910 and 1917, 19 had completely red upper and black lower mandibles, and only i had red upper and pied red and black lower mandibles. Thus, according to these characters the birds introduced at Giza belonged to manillensis. Further, the specimen from Bahig is also referable to manillensis. It is plausible that other subspecies have been introduced into Egypt, as identified by other workers, but none of their specimens was available for this review.

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## The White-bellied Swiftlet Collocalia esculenta from Java

by S. Somadikarta

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In 1848 (p. ${ }^{369}$ ), Streubel gave a name to a swift from Java, Hemiprocne fucivora. The type of this species (ZMB No. 8390, Temminck, Java, sex not indicated) is not a Grey-rumped Treeswift Hemiprocne longipennis (see Brooke 1969) as had been supposed, but is a very typical White-bellied Swiftlet Collocalia esculenta linchi from Java. It is glossy green, the hindtoe is naked, without white spots on the under part of the tail feathers. The measurements (in mm ) of the wing, the tail, the exposed culmen, and the tarsus of this specimen are 87.0 (the ninth primary in moult, score: 2-see Newton 1966) $34.0,4.0$, and 9.0 respectively. These suggest that Collocalia fucivora (Streubel 1848) is a senior synonym of Collocalia linchi Horsfield \& Moore 1854 (a paper on the identity of $C$. linchi is in preparation).

Streubel's name, however, has appeared only once since it was published. Gray (1866: II9) doubtfully listed Hemiprocne fucivora Streubel as a synonym

